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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,517	08/19/2002	Weiquan Liu	42390.P9659	2647

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EXAMINER	
WOZNIAK, JAMES S	

ART UNIT	PAPER NUMBER
2626	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/018,517	LIU ET AL.	
	Examiner	Art Unit	
	James S. Wozniak	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 August 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *8/19/2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claims 7-12** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 7 is drawn to a "program" data structure *(electrical, optical, acoustical, carrier, infrared, etc. signals, specification, page 9)* not limited to a tangible computer readable medium and as such is non-statutory subject matter. See MPEP § 2106.IV. Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed tangible computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. In this case, the scope of claim 7 is not limited to the recited tangible computer readable mediums disclosed on Page 9 of the specification (see magnetic or optical discs; see hardware-based readable media) since it includes the aforementioned non-tangible computer readable mediums, and as such is directed to non-statutory subject matter. In order to overcome the present rejection, the examiner suggests a claim amendment directed towards indicating that the claimed computer program is stored on a tangible computer readable medium.

Dependent claims 8-12 do not remedy the 35 U.S.C. 101 issue noted with respect to claim 7, and thus, are also rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over McKeown et al *(U.S. Patent: 6,473,730)* in view of Ueda *(U.S. Patent: 6,493,663)*.

With respect to **Claims 1, 7, and 13**, McKeown discloses:

Parsing a document (extracting and tagging document text, Col. 4, Lines 27-52);

Selecting paragraphs from the document through a subsuming relation calculation *(scoring paragraphs based on linking terms, Col. 5, Line 32- Col. 8, Line 55)*; and

Rewiring the selected paragraphs into a summary *(extracting and providing key sentences as a document summary, Col. 10, Line 38- Col. 11, Line 49)*.

Although McKeown teaches performing summary generation for a single document, McKeown does not teach summary generation processing as applied to a document group, Ueda however teaches such summary generation processing *(Col. 7, Lines 34-61)*. Ueda further discloses summarizing method implementation as a program stored on a computer readable

medium *(Col. 3, Lines 20-24)*. Ueda also recites method implementation using a computer processor that would inherently require a bus for communicating with the disclosed computer memory medium to achieve document summarization processing *(Col. 23, Lines 29-44)*.

McKeown and Ueda are analogous art because they are from a similar field of endeavor in summary generation as applied to natural language documents. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of McKeown with the summary generation processing for a document group as taught by Ueda in order to implement document summarizing technology capable of processing a document group to provide an overview thereof *(Ueda, Col. 1, Lines 18-26)*.

With respect to **Claims 2, 8, and 14**, McKeown further recites:

Extracting noun phrases from the document *(extracting noun phrases, Col. 3, Line 62- Col. 4, Line 15)*;

Categorizing the noun phrases that are entity names *(identified proper noun phrases relating to an entity, Col. 3, Line 62- Col. 4, Line 15; and Col. 5, Line 41-57)*; and

Converting the entity names into canonical form *(Col. 5, Lines 7-20)*.

Ueda additionally teaches verb phrase *(Col. 20, Line 65- Col. 21, Line 4)* and plural document processing as applied to claims 1, 7, and 13.

With respect to **Claims 3, 9, and 15**, McKeown further discloses:

Linking noun phrases in each paragraph in the document with identical noun phrases in the other paragraphs *(linking of noun phrase occurrences, Col. 5, Line 58- Col. 6, Line 39)*; and

Counting the links for each paragraph *(link occurrence totals, Col. 5, Lines 58- Col. 6, Line 39)*.

With respect to **Claims 4, 10, and 16**, McKeown further discloses:

Ranking the paragraphs *(ranking segments with respect to importance, Col. 10, Line 38- Col. 11, Line 49)*;

Applying a co-reference resolution algorithm to the paragraphs *(linking noun phrases to a head noun phrase- see "red wine" example, Col. 5, Lines 7-20)*; and

Replacing pronouns in the paragraphs with their full entity name antecedents *(merging pronouns and proper noun phrase processing, Col. 5, Lines 7-57)*.

Ueda further teaches plural document processing as applied to claims 1, 7, and 13.

With respect to **Claims 5, 11, and 17**, Ueda further discloses:

The documents have a common topic independent of domain *(common summary generated for diverse documents, Col. 3, Lines 16-19)*.

With respect to **Claims 6, 12, and 18**, Ueda further discloses summarizing Japanese or English documents *(Col. 18, Lines 26-38)*.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Fein et al *(U.S. Patent: 5,924,108)*- teaches a phrase-based document summarizer.

Liddy et al *(U.S. Patent: 5,963,940)*- teaches a means for generating a document summary by determining a most relevant paragraph.

Paik et al *(U.S. Patent: 6,076,088)*- teaches a system for summarizing a collection of documents.

Yoshimi et al *(U.S. Patent: 6,374,209)*- teaches a system for generating a document abstract.

Kupiec et al *(U.S. Patent: 6,766,287)*- teaches a summarizer for a group of documents.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
5/17/2006

DAVID HUDSPETH
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